

Flight, August 7th, 1909.

# Flight

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE AERO CLUB OF THE UNITED KINGDOM.

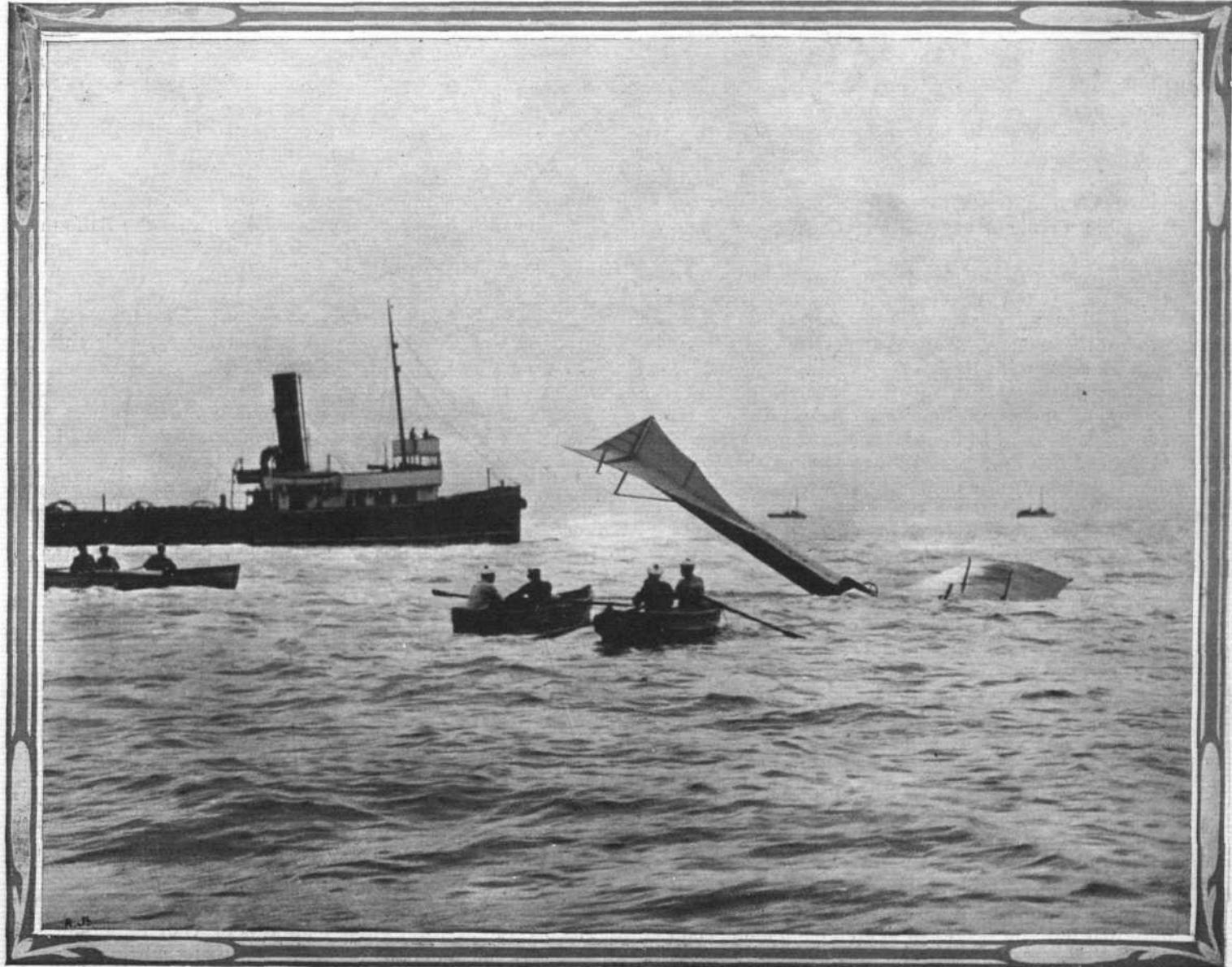
No. 32. Vol. I.]

AUGUST 7TH, 1909.

[Registered at the G.P.O.]

as a Newspaper.

[Weekly, Price 1d.  
Post Free, 1½d.]



HUBERT LATHAM'S SECOND CHANNEL ATTEMPT.—Scene after the rescue of the aviator by the steam pinnace from the battleship "Russell," the tug standing-by for rescuing the derelict machine.

## OUR IMPROVED NATIONAL PROSPECTS.

It is an unusual thing for Parliament to be sitting on an August Bank Holiday, and the matter which engaged the attention of Members at St. Stephen's last Monday was of unusual character also, for in the course of a long statement, delivered with characteristic rapidity, the Minister for War showed that at last the Government has begun to prepare the way for an adequate aeronautical equipment for naval and military uses for this country. The points of Mr. Haldane's speech and of the debate which followed it have been analysed and classified for clearness' sake, and are presented on another page of this issue. We do not propose to recapitulate the matter here, but to dwell only on one or two reflections that arise naturally out of the proceedings.

Let us begin by getting to the root of the matter, and consider what money is to be available during the current financial year for the exploitation of aerial navigation for national uses. Hitherto progress has been cramped because funds were lacking. In this material world, progress in mechanics, as in most branches of activity, is dependent on money; without money all is vain. The lump sum which has gone forward in the British estimates for aeronautics is £78,000. We who know the vast field to be covered will realise that such a sum is not enough for the work that has to be undertaken to enable Britain to make up lost ground; but we who know also how tedious has been the toil to convert the authorities, and how niggardly have been the results to date, must feel something like a thrill of joyous surprise when we learn not only that so appreciable a scale of expenditure is to be embarked on by way of a beginning, but also that the Commons passed the vote unanimously, not a voice being heard against it. Taken in conjunction, those two points certainly illustrate what was brought out by Mr. Cecil Harmsworth, namely, that whatever opinions may be expressed concerning lack of Government aeronautical enterprise in the past, at this precise moment the Government and the Commons, irrespective of party, are farther advanced in their ideas of national aeronautics than is the British public. We are glad of this, because such education as the man in the street needs can be supplied him in a matter of minutes only. That is to say, he has merely to see airships in being to be convinced of their reality and value; and as soon as he shall be afforded that opportunity he will act the only part he will ever be called on to play, he will be ready always to lift up his voice in favour of his native country being equipped with machines for aerial locomotion in such quantities and in such kinds as to be better than the best aerial fleet possessed by any other nation. But unless the funds are available for procuring examples of various kinds of airships with which to give the man in the street his needed object lesson, we should have to wait an indefinite period to see this country properly started on the quest of the mastery of the air that is so essential to our safety as an island nation.

It is quite plain that whatever may be the shortcomings of the grant that has been asked for and is now passed, at least the sum total is sufficient to ensure that not one specimen of an airship alone shall be possessed by this nation within the next twelve months. The sum that is to be spent on national aeronautics is, in the present state of affairs, really something more than £78,000, for Mr. Haldane's statement made it quite clear that, in addition, the Government is depending on

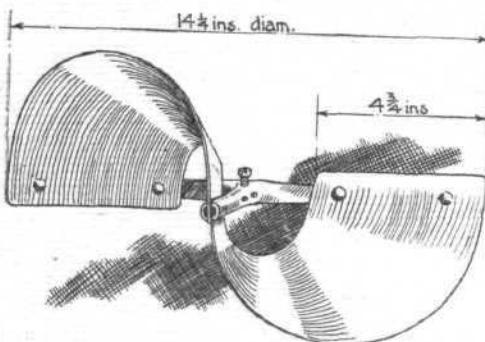
the National Airship Fund, that is being raised by the *Morning Post*, being carried to a successful issue. He counts on this nation being in possession of four airships early next season, but one of the quartette is to be the machine that, after test, will be bought by the National Airship Fund, so that a total of £100,000 is more like the sum that will be actually spent. As things go, that is certainly a fair beginning, because it were idle to lay down fleets of any particular class of airship at a period when it is eminently desirable to improve all the time on existing types. We have not gone anywhere near far enough to talk of standardising airships. According to the plan that has been unfolded this week, a very wise system has been followed in dividing the practical work in connection with national aeronautics between the Navy and the Army, leaving it to the senior service to experiment with and to develop the rigid dirigible, and putting it right away into possession of a full-size practical machine by commissioning such a world-famed engineering firm as Messrs. Vickers, Sons, and Maxim to build the first example.

The semi-rigid and the non-rigid type of airship have been entrusted to the Army, for of the total of four machines mentioned by Mr. Haldane, three are left to the Army. They are somewhat nebulous, because two have to carry out certain prescribed tests before they are acquired, and it may be a question as to whether the third can be seriously regarded as a war balloon, for it will be composed of a gas-retaining envelope that has been secured from a French factory, and which will be used in combination with the *nacelle* possessed already by the Balloon Department at Aldershot. The two serious and really large dirigibles for Army use that are in prospect are one that the Government will purchase, and another which will be bought by the National Airship Fund. These will probably be the frameless Clement-Bayard, which the Parliamentary Committee of Aerial Defence has arranged to have brought over to this country, and the Lebaudy. Which will be bought with which money appears a matter of indifference, the arrangement being that the first suitable airship to be available shall be the one which patriotic private subscribers to the National Airship Fund shall present to the Government. This making of the machines undergo reasonable tests before purchase is a commendable action on the part of the Government, because, however much we may be in need of airships, we do not want to buy them like a pig in a poke. Useless airships are worse than no machines at all, because they represent wasted money and dissipated effort.

So far, regarding this as a first year's programme, it may be pronounced satisfactory—albeit, we should like to see Mr. Haldane putting a little more faith in practical active work, and not setting such a proportionately much greater store by "theoretics," if we may coin a word to describe the purely theoretical and, in many cases, the merely opinionated study of aerial locomotion. But it must be borne in mind, moreover, that very much depends upon the National Airship Fund being brought through to a successful final issue, and that there yet remains to be found £9,000 out of the total £20,000. Needless to say, the whole matter is of vital importance to the immediate prospects of the flying movement in this country. And hence it behoves all who deem themselves friends of that movement to exert every ounce of the influence they possess in bringing in the shekels to the offices of the *Morning Post*.

## MODEL PROPELLERS—FURTHER “FLIGHT” CHALLENGE RESULTS.

WE are now able to give some additional figures that have been forthcoming as the direct result of Mr. Cochrane's challenge to makers of small propellers or fans, since the trial of the Watford Engineering Co.'s propeller, to which we referred in our issue of July 17th, was duly carried out a few days ago under our supervision. Summed up briefly, it may be said at once that Mr. Cochrane was not called upon to hand over his five-pound note on this occasion, since, even with his smaller propeller (that denoted “C. 2” in our previous table), he was able to obtain a



The Beedle propeller, the principle of which is shown above, is of very substantial design, and is not only suitable for use as a “fan,” but is doing useful work as a marine propeller and for other purposes.

propeller when fitted to a certain electric motor coupled up on a 200-volt circuit. It is only stipulated that the propeller must not weigh more than 6 oz. with its boss; but, on the other hand, it is immaterial how much energy it absorbs or what speed it happens to make. In other words, the question of efficiency does not enter into the question, except in so far as the opportunity of the tests has been seized upon by us to obtain some rough data that has a direct bearing upon it.

Our first illustration shows the “Beedle” propeller which was tested on the Cochrane electric motor, while the accompanying table represents the performance of that propeller placed alongside the corresponding performance of the smaller “Cochrane.” From the figures contained in that table, it will be observed that the weight of the “Beedle” was more than double that of “C. 2,” and that the overall dimensions were similar, but

that its efficiency was apparently well ahead of the “Cochrane.” Also, it will be observed by comparison with the table in our issue of July 17th, that the propeller “C. 2” gave a rather higher thrust than it did previously, and that the current consumption was apparently somewhat lower.

Concerning this last point, which affects the accuracy of all these tests, it should be placed on record that the ammeter employed was far from being a high-class instrument. On the other hand, the Elliott speed-indicator which we employed by way of checking Mr. Cochrane's ammeter, was absolutely to be relied upon for its readings. A comparison of speeds and of current indicates the existence of discrepancy, and hence the warning may be given that the speed indicator, not the ammeter, should be trusted. Had any great value been attached to the tests, we should have

made some careful investigations into the characteristics of the motor, but under the circumstances, it is neither worth while to ascertain by laboratory test the current consumption in relationship to the speed nor the mechanical efficiency corresponding to each reading, for, as we explained previously, they are at best tests of small fans, and furthermore, the motor in question cannot be deemed adequate as a plant for conducting conclusive tests of this character.

Propeller	“C. 2.”	Beedle.
Total weight	2 1/4	6 ozs.
Weight without boss	1 3/4	— “
Overall diameter	14 1/2	14 1/2 ins.
Exerted thrust	29 1/2	23 1/2 ozs.
Current absorbed	.75	.5 amps.
Equivalent e.h.p.	.212	.134
Thrust per e.h.p.	.147	.176 ozs.
Speed of motor	1,600	1,700 r.p.m.



### RULE OF THE ROAD IN THE AIR.

A SERIES of provisional regulations, constituting the “rule of the road” for aviators and aeronauts, has been drawn up by the Commission Aerienne Mixte. Aeroplanes, when meeting, must keep to the right and maintain a distance of at least 50 metres between each other, but this rule does not apply when there is a difference of at least 30 metres between the altitude of the two machines. Also, in competition, the distance to be maintained between the machines may be reduced to 25 metres by the Judges.

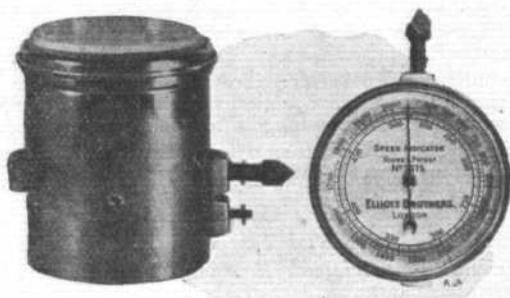
In the case of dirigibles a distance of at least 500 metres must be maintained between the two vessels, unless the difference in altitude is more than 150 metres.

When flying at night all machines must have a red light on the left and a green light on the right which can

be seen both from the front and the side, exactly as in the case of the side-lights of a vessel at sea. White lights must also be placed at the farthest point forward and the lowest part of the machine.

#### Ruling the Air.

THE Ligue Aerienne du Nord, who are organising the Douai Meeting, have formed a committee having for its object the collection of documents and evidence relating to the law of the air, to encourage discussion among its members on theories relating to flight, to support aviators and aero clubs in matters relating to law, to endeavour to get some definite rules drawn up at a future International Conference, and to investigate as far as may be public opinion on the subject.



Two views of the Elliott speed-indicator which was used for these tests and which gives a direct reading in revolutions per minute.

# GOVERNMENT ATTITUDE ON AIRSHIPS AND AEROPLANES.

## MR. HALDANE'S STATEMENT AS TO EXPENDITURE DURING THE COMING YEAR.

IN connection with the vote for grants in aid of scientific investigation which was brought before the Committee of Supply in the House of Commons on Monday last, some very important statements were made by the Secretary of State for War, and some very useful information was vouchsafed as regards the attitude of the present Government towards the application of flight to the needs of the naval and military authorities. Mr. Haldane started off with saying that progress in aviation as applied to the Army and Navy could not be said to be very much, although it was probably more substantial than at first might appear. In his view, moreover, it was impossible for anyone to claim that any really very marked progress had been made as regards the service of defence anywhere within the whole world. A great deal had been done in designing and building, but that was quite a different thing from making machines that would fly, since such machines for the purposes of war must fulfil certain special conditions and, above all, must give exactness in results. Pressed later on as to exactly what he meant by the special difficulties which had so far prevented any of the present flying machines from being effective and accurate as war machines, Mr. Haldane spoke of the control that is needed as regards variations of altitude if clouds are to be circumvented, and of the troubles which are inseparable at the moment, both when starting off with these machines and when bringing them to land again.

### Government Policy.

Referring to the steps that he had taken, whereby the Government could assist matters, Mr. Haldane mentioned that the Prime Minister and the First Lord of the Admiralty had asked him to take in hand the devising of machinery and the arrangement of the main principles upon which a move should be made. It was then that he made up his mind that no real progress was possible except by proceeding scientifically, and hence, although he realised that it might be very damping to some ardent spirits, he felt sure that method would be most satisfactory in the long run. Hence the Committee of Imperial Defence was asked to investigate the subject in conjunction with a technical sub-committee which could take evidence. The report of that committee was to the effect that machines must be divided into :—

Rigid dirigibles, which is the only type which is of real use for naval purposes.

Non-rigid dirigibles, which may prove themselves best suited for the Army, and

Aeroplanes, which are at present very restricted as to utility, and concerning which great strides will have to be made in respect of controllability. Concerning aeroplanes, Mr. Haldane remarked that even if we possessed 200 of the best present construction, we should not be one bit further on than we are at the present moment, and this in spite of the remarkable performances of Mons. Bleriot in Europe, and of the Wright Brothers in the United States and elsewhere.

Speaking as to the definite policy which has been adopted, Mr. Haldane said that already the Navy has been assigned the duty of endeavouring to construct a rigid dirigible, while the Army has not only been instructed to experiment with non-rigid types of dirigible, but also with aeroplanes, even though the Committee of Defence reported that the non-rigid dirigible is a long way further advanced for Army purposes than is the aeroplane at the present time. As regards the rate of progress, he deemed it essential to feel the way slowly making experiment, since at the very best we are still very deficient in certain fields of knowledge. On the other hand, however, he did not think that this country need feel much concerned at present over the fact that the amount of initial progress has not been as great as that of Germany and France, and, perhaps, also of the United States, since anything that has been done in any part of the world in regard to this class of invention is to a large extent available to anybody, and, after all said and done, the flying machine is a very simple machine, and whatever its construction, cannot long be kept secret. He very much doubted, in fact, that any machine that any Government possessed would remain a secret for more than a very limited time. He referred to the position occupied at the present day by Great Britain in respect of submarines, in connection with which very much the same backwardness was, with truth, alleged not so many years ago, whereas now, as a direct result of the scientific procedure of the Admiralty, our submarine equipment is in advance of that of any other country. So, too, as regards motor cars, he pointed out that at one time we were behind, whereas to-day he had a strong impression that if we were not up to the best Continental level we were very near indeed to it. For all these

reasons, therefore, he had advised the Prime Minister that science should come first. He did not mean to say that we should not construct or experiment, but he thought it vital that we should investigate the mass of scattered information available everywhere in scientific and orderly fashion.

### Duties and Resources of the Advisory Committee.

To that end the Advisory Committee, under Lord Rayleigh's presidency, has been constituted. Already that Committee had held various meetings, and under its instructions continuous work had been proceeded with at the National Physical Laboratory. He emphasised the fact that that Committee was not formed to construct or even to invent; that its purpose is to advise on special questions brought before it by the various departments concerned, and to scrutinise inventions submitted to it. It also has to conduct systematic experiments, for which purpose proper apparatus has had to be furnished. Already the Committee had reached the stage of issuing its first report, and Mr. Haldane hoped that in a very few days this report would be made public. One of the first things performed by the Committee had been the making of systematic arrangements whereby it should be kept in close touch with everything that was being done in connection with the study of flight all over the world. Also its energies had been directed towards determining the general questions which should be studied, and memoranda had been drawn up by experts on such subjects as stability, propellers, and like matters of a technical nature. There are, for instance, points specially relating to aeroplanes, such as the mathematical investigation of stability, of rudder action, of gusts of winds, and of many other details of a like kind, many of which were mentioned by Mr. Haldane, to give a general idea of the field covered. Most of our readers are, however, well acquainted with the range of work that lies before any such committee as this, and before the National Physical Laboratory, and consequently for them the most important point mentioned by Mr. Haldane was that the Committee has been furnished with a considerable scientific equipment already. In the course of a subsequent reply during the debate, he also stated emphatically once more that it was not a question of funds, since the Government could not afford to make difficulty about funds, and that the Committee supplied their own estimates in this matter.

### Dealings with Inventors.

Coming to the question of the private inventor, Mr. Haldane stated that it was the design of the Committee to afford assistance to him whenever such a course could be properly pursued. On the other hand, however, the private inventor is always a great anxiety, and consequently, in order to avoid any subsequent trouble as to the question of origination of ideas, the Committee insist upon any invention being covered by patents before it is brought before their notice.

### The Building Programme.

The immediate practical work that is actually being carried out by the Admiralty and by the War Office, in consultation with the Committee, includes the manufacture, under Admiral Bates, of a rigid dirigible which is at least the size of the "Zeppelin," at the Barrow-in-Furness works of Messrs. Vickers, Sons and Maxim. Mr. Haldane mentioned that this undertaking was essentially an engineering matter, and that Messrs. Vickers were eminently qualified for the work, and were working out the construction of the machine in conjunction with the Admiralty. This ship will, he said, carry about 20 men, and is to be ready for trial some time next spring.

At Aldershot, the War Office is now reorganising its factory, the instruction department being separate from the construction department, and preparation being made for building a huge shed which will accommodate dirigibles of the largest size. Down there, moreover, a semi-rigid dirigible, with carrying capacity of about eight men, is to be put together with as little delay as possible, for already the gas-bag has been ordered from abroad from a firm having had special experience of this kind, while the car and the engine are in the possession of the War Office down at Aldershot now.

Before leaving the subject of airships, Mr. Haldane referred to the very patriotic enterprise which had been undertaken by the *Morning Post* in getting together a public fund for presenting yet another dirigible to the War Office, and by the *Daily Mail*, working in conjunction with the Parliamentary Committee, in their generous offer of the shed now in course of construction on a site provided by

the War Office. He pointed out that the *Morning Post* have a contract for one dirigible in addition to the other ship which is coming over under the auspices of the Parliamentary Committee, and that if they are satisfactory he understood that one will be presented to the nation while the War Office proposes to purchase the other, provided that it comes up to the prescribed tests. Hence Mr. Haldane claimed that we ought to be in possession of three dirigibles of a new type before very long.

As regards aeroplanes, two are to be obtained for experimental purposes without delay, and on these experiments are to be carried out *de novo*. Experiments are even now being carried out by the Advisory Committee, and with the efficient staff of engineers now available at Aldershot, rapid progress is anticipated by the Government.

#### Monetary Estimates.

The total prospects are, therefore, as already stated, one large rigid dirigible for the Admiralty, three non-rigid dirigibles for the War Office, in addition to their present war balloon equipment, and two new aeroplanes, in addition to such apparatus as the country already possess in this line. In all the Admiralty will be spending this year no less than £35,000, while the War Office will be spending over £36,000, and the total expenditure of the country in this direction during the present financial year will be about £78,000 all told. These sums include considerable expenditure on machines, besides a shed which is being built at a cost of £6,000, and another sum of £6,000 for stores. Great advance is, therefore, being made over last year, when a very small sum indeed was spent on these things, and even as compared with other countries, Mr. Haldane contended that we are not so badly off. He stated that last year France spent, so far as we know, £47,000, and Germany £123,000, of which £26,000 went towards balloon battalions. There was, however, also a large private subscription in Germany for airships, amounting to something like £265,000. Austria-Hungary spent £5,500, but the British expenditure was only £5,270.

#### Mr. Haldane's General Attitude.

Other remarks which were made by Mr. Haldane in the course of his speech went to show on the one hand that he did not think very much of the practical use of dirigibles or of aeroplanes in their present state of development, but that on the other hand he deemed it essential for the Government to keep abreast in all matters relating to equipment for war. One remark, for instance, was to the effect that there never will be, so far as he could see, any very large private ownership of these machines (airships), although no doubt a few country gentlemen will have their aeroplanes. And, *per contra*, he said we should nevertheless be very foolish if we were to neglect these possible instruments of war, and it is vital that we should push ahead. Similarly, too, as regards the confidence of the Government in the step they had already taken, he claimed that the Government had laid the foundation on which progress ought to be pretty sure, that there was abundance of time if they used it, but that the great point was that they could not give too much attention to the scientific side of the problem, although he agreed that they could not leave out of sight the practical side. He admitted that it was true the Government could buy very many machines of different types, but probably three out of four would be failures, and he did not believe that they would be so far on by that means as by working with selected types.

Several of Mr. Haldane's statements quoted above were made in reply to criticisms raised in debate, but a better impression can be conveyed of his general attitude on the subject by classifying his remarks as has been done herein.

#### Mr. Haldane's Parliamentary Critics.

The two most important speeches criticising Mr. Haldane's statement were those of Mr. A. Lee, chairman of the Parliamentary Committee (Aeronautics), and Mr. Arthur Du Cros.

Mr. Lee complained that foreign countries had been allowed to gain the initial advantage which in the event of war might be very serious, and he submitted that we were a little more behindhand than Mr. Haldane had admitted, because we not only lacked plant and the airships themselves, but also what was more important and more difficult to attain, experience in handling these craft. He thought that more confidence would be felt in the Advisory Committee if some practical aeronauts were members of it, even though the Committee had power to consult with any practical aeronauts they chose. He thought, too, that we might go further than we had done in the way of purchasing the accumulated experience of other countries, and he urged that while the War Office is getting into working order with its promised construction department, it might give a contract for a dirigible abroad. He stated that the Parliamentary Committee felt strongly that this question should be taken up at the expense of the public funds rather than that reliance should be placed on private subscriptions. In France and Germany

there were actual effective squadrons of airships in existence, and in both these countries very large sums of money had been spent by the Governments apart from any public funds that had been raised, whereas we in this country had not even one effective unit.

Mr. Lee also urged that these foreign airships had shown themselves capable of performing great things in spite of the Secretary of State's plea that we must proceed in this matter with certainty and exactness. Mr. Lee, for his part, thought that much too severe a standard was being set up, and he pointed out that in regard to all these engines of war it had never been the custom of this country to wait until certainty and exactitude were attained. In his view, the Government should take advantage of the power it had to buy the accumulated experience of others, for in that way it would possess the best foreign types, and could then use them for the purpose of experiment. The money thus spent would be well laid out. Mr. Lee also asked the Secretary of State not to be too exacting in his tests. If the Parliamentary Committee were successful in its desire to bring the "Clement-Bayard" over here next month, he thought that the Government ought to buy it if it sailed from Paris to London and executed manoeuvres during its stay of a month with reasonable satisfaction, even though it might not satisfy certain ideal conditions which the War Office had laid down.

On the subject of the training of men to man these craft, Mr. Lee pointed out the tremendous importance of this point. The present staff at Aldershot was, he alleged, extremely small, and had had very little practice, and he thought that Mr. Haldane had far too optimistic a view as to our position in this regard. In France the balloon division was better equipped and trained than any other in the world. For a constant series of practical experiments were being conducted for the edification of the men comprising it, and the practice that they were obtaining was with really efficient warships. For this reason, too, he desired to impress upon the Government the necessity of purchasing representative ships of all types as soon as possible for the purpose of experiment, and for the training of our men, while obviously, too, the provision of adequate shelters was essential, and he claimed that a number of these sheds ought to be erected at different strategic points at once.

Concerning the utility of airships in case of war, Mr. Lee contended that even though they could not be used for the transport of troops, and even if their use was at present limited by the fact that they were fair-weather craft, it would yet be very rash to say that improvements in construction would not soon make them independent of normal weather conditions and cause them to be a very curious factor to be reckoned with. On the other hand, too, ships were already of enormous value for the purpose of reconnoitring by land and sea, with a wide range of action, and an area of observation which would enable them to cancel ordinary strategy as far as it affected the disposition of ships or of men. Aeroplanes, too, might at any time be invaluable for reconnaissance purposes, to say nothing of the moral effect produced by them as by airships upon an enemy. He urged, for instance, that in the case of some of our smaller punitive expeditions, these vessels might prove most efficacious, besides effecting enormous economy as regards expense. This country, in particular, he urged, would be in serious danger if it allowed itself to be without an experimental equipment any longer, in spite of the limited value of airships at the present time. The mere fact that it depended upon its naval supremacy for its security, meant that it was particularly vulnerable on the outbreak of hostilities as regards any of its warships that might be lying in dock or in harbour. But apart from that particular contingency, or, indeed, any other contingency that might be subject of controversy, he did not think there could be any difference of opinion as to the urgent and vital necessity of our keeping abreast of foreign countries in this calculable factor in the warfare of the future. That was why he ventured to press upon the Government the necessity of making use of the ample funds which were said to be available, and of employing them at the earliest possible moment for the purchase of experimental types.

Mr. Arthur Du Cros complained that Mr. Haldane had told them nothing regarding the practical constructive programme of the Army department, even though his statement with regard to the Advisory Committee was eminently satisfactory. He fully understood that the Committee was intended solely to deal with abstract questions, not to initiate or construct anything. Its progress would, in fact, be necessarily very slow, and that being so, it would be a useful thing if some machinery were devised whereby the Army and Navy could consult and assist each other. He maintained that long before the Advisory Committee had been appointed, airships had become important from a point of view of national defence. The duty of the Committee ought, therefore, to have commenced at that point, and the Committee ought to have been in a position to examine airships to-day. On the other hand, Great Britain was the only European power which was not possessed of a practical airship.

Referring to Mr. Haldane's statements as to the duties of the Advisory Committee, Mr. Du Cros felt that it was there that the Government policy fell short of the requirements of the case. They were in fact told that no airship was in course of construction at Aldershot at the present moment, whereas it was only three months ago that the Prime Minister announced that certain dirigibles would be constructed there, and that re-organisation was proceeding at once. Mr. Du Cros contended that enough data had been accumulated during the past few years "to sink an ordinary airship," but Mr. Haldane now told them that until further data had been obtained the War Office did not propose to construct any vessel. He hoped that the Government did not intend to wait until the national airship was delivered to this country before doing anything in itself, for that would not be until the spring, and it would be most unfortunate if matters were postponed until then. The output in France and Germany, taking Government and private factories together, could not be less than 30 vessels in a year, and in the course of a year or two it would be assumed that the German fleet would comprise 24 or 30 ships. The contrast, therefore, was sufficiently startling.

Concerning better response that had been made in Germany than in this country for public subscription to the National Airship Fund, Mr. Du Cros stated that there was a good reason for the response in Germany that did not exist over here. It was, in fact, there thought that an aerial fleet would do something to nullify the strength of the British fleet on the sea, whereas the people of this country had no such incentive to make them come forward with their subscriptions.

## WOLSELEY ENGINES FOR AIRSHIPS AND AÉROPLANES.

IT almost goes without saying that the engines which will be fitted to the huge rigid type airship, now being built by Messrs. Vickers, Sons, and Maxim, will be manufactured at Adderley Park in the well-known Wolseley Tool and Motor Car Company's workshops. Work is proceeding apace, by the way, upon that enormous vessel for the Admiralty, and a gigantic shed is now in course of construction in the Cavendish Dock, at Barrow, for housing the vessel. The shed is being erected upon piles over the water, will be 600 ft. long by 100 ft. wide, and will open facing the Wolney Channel and Morecambe Bay. Special efforts are also being made by the Wolseley Company to obtain the order for the engines that will be required for the (*Morning Post*) National Airship, and from many points of view it is to be hoped that this ship may at least have British built engines.

It must be remembered, too, that this firm have already had a very considerable amount of experi-

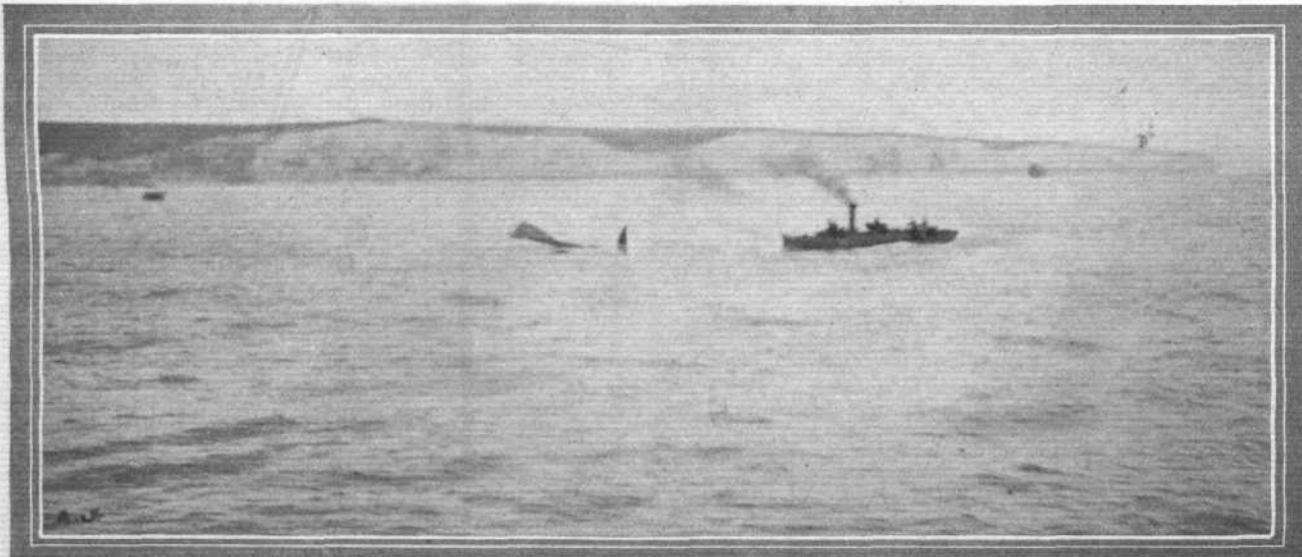
Finally, Mr. Du Cros claimed that the Government would be warranted in dealing with the whole subject in a definite, immediate, and effective fashion, whatever the demerits of airships might be. He pointed out that we were not pursuing a will o' the wisp, since flight had been accomplished as the result of years of toil and patient experiment. No nation could, in fact, afford to be without airships, since they were destined to be a prominent weapon in every national army.

Amongst other speakers, most of whom urged the Secretary for War to take more active practical steps than he had foreshadowed in his speech, were Mr. Cecil Harmsworth, Sir G. Parker, Mr. Dundas White, Major Anstruther-Gray, Mr. Harold Cox, Mr. Mond, and Lord Balcarres.

Mr. Cox contended that the progress made in France and Germany was not due to their respective Governments, but almost entirely to private enterprise, and he claimed that what we had to do was to wait until our own people had the intelligence, energy, and patriotism to develop this new method of locomotion, that he personally believed was going to be a very big thing indeed. He stated that if Mr. Haldane found that English manufacturers and men of science were behind Frenchmen and Germans in this wonderful new invention it was his duty to buy the best aeroplanes or airships that he could procure abroad, thus strengthening our national position far more by buying the best of foreign productions than by conducting wasteful experiments of our own. Not only did he urge this course from the point of view of economy, but also by way of a challenge to our own manufacturers and men of science to "go one better."



ence in the construction of special engines for aerial work, in addition to their unique experience with those for marine work as well as for motor cars; and that they have already engined the machines of Professor Huntington and of Mr. Pitman, besides supplying the motor for a flyer which is now being built in France. It is interesting to note in this connection the ingenious method that has been adopted at the Adderley Park works for testing the aerial engines under suitable conditions instead of upon the usual indoor test-bench. Each engine is rigged up upon a specially constructed motor car chassis, and is there fitted with a fan brake, adjusted to absorb a known horse-power. The chassis is then driven at high speed round and round an uneven track during the whole time the engine is under test, and thus it is not only working under approximately the same conditions that it would be on a flyer, but is being subjected to a continuous series of shocks of considerably greater magnitude than in ordinary use.



THE END OF LATHAM'S SECOND CHANNEL ATTEMPT.—Arrival of the steam pinnace from the British battleship "Russell" at the scene of the "finish," within about two miles of the English coast at Dover. Mr. Latham will be noticed standing up on his machine waiting for the pinnace to rescue him.

# AERO CLUB OF THE UNITED KINGDOM.

## OFFICIAL NOTICES TO MEMBERS.

### Fixtures for 1909.

August 28 ... Gordon-Bennett Aviation Cup, Rheims.  
October 3 ... Gordon-Bennett Balloon Race, Zurich.

### French Aero Club Banquet to M. Bleriot.

M. Bleriot was entertained at a brilliant banquet by the Aero Club de France at the Hotel Palais d'Orsay on Saturday last.

The guests included M. L. P. Cailletet, President of the Aero Club de France; M. Louis Barthou, Minister of Justice; M. Millerand, Minister of Public Works; M. Depasse; M. Lampue, President of the Conseil General; Commandant Chausse, President of the Municipal Council; Mr. Roger W. Wallace, K.C., Chairman of the Aero Club of the United Kingdom; M. Henry Deutsch de la Meurthe; M. Santos-Dumont; Mr. Hart O. Berg; Comte Henry de la Vaulx; M. Léon Levavasseur; Mr. Cortlandt Bishop, President of the American Aero Club; M. Georges Besancon; Comte de Castillon de Saint-Victor.

M. L. P. Cailletet, President of the Aero Club de France, in the course of his remarks, referred especially to the magnificent reception which M. Bleriot had met with in England.

The speech of Mr. Roger W. Wallace, K.C., Chairman of the Aero Club of the United Kingdom, elicited great applause. Mr. Wallace, after referring with enthusiasm to the work of M. Bleriot and his fellow aviators, spoke of the fresh ties between the two countries which M. Bleriot had by his great achievement knitted. It was a further consummation of the Entente Cordiale—this time an aerial Entente. Mr. Wallace raised his glass to the scientific progress and the glory of France.

It was by a delicate compliment, after this speech, that everyone rose when the band struck up "God Save the King," and the toast was drunk with the utmost enthusiasm.

### Rheims Aviation Week.

The Aero Club de France have sent over the following list of apartments to be let for the Rheims Aviation Week. Some of these are on the outskirts of Rheims, but fairly close to the Aviation Ground, which is about four miles outside Rheims:

MM. Castella (boarding house), 19, Boulevard de la Paix, Rheims.  
Boissel, 20, rue des Murs, Rheims.  
E. Pierme, 20, rue des Murs, Rheims.  
Léon Brion, 32, rue de l'Ecu, Rheims (house to let at St. Thierry, near Rheims).  
Paul Dely, 23, rue de Bourgogne, Rheims.  
René Humbert, 99, route d'Orléans, Rheims (room to be let, 32, rue Villemot-Huart, à Rheims).  
Villemot-Huart, à Rheims.



## FLIGHT HISTORY AT

THE Exhibition organised under the auspices of the Aero Club of France, opened at the Grand Palais, as arranged, on July 30th, and will probably be available for the visits of the public until August 25th. It is an interesting display from many points of view, perhaps more from the historic than any other. In the history of the world, even in current history, it is necessary to pause sometimes, and with the conquest of the Channel the history of flight marks time. Thus from the days when the Jesuit Lana

Madame Veuve Chemin, 29, rue des Capucins, Rheims.  
L. Joubert, 47, rue Andrieux, Rheims.  
André Menon, 18, rue de Tillois, Rheims.  
J. Ollier, 47, bis rue Chativesse, Rheims.  
Madame Ludovic Roblot, 155, Gaubourg Cères, Rheims.  
Ribaille-Paquin, Chigny, près Rilly la montagne, Rheims.  
E. Malric, 39, rue de Betheny, Rheims.  
Etienne Maire, 36, rue Burette, Rheims.  
Madame Léon Oge, à Villers-Allerand, par Rilly la Montagne, Marne.  
Jules Bernard, 193, rue des Capucins, Rheims.  
Dettweiler, 29, rue Victor Rogelet, Rheims.

**Hotels at Rheims**—Hotel du Lion d'Or. Le Grand Hotel.

### Baron De Forest's £4,000 Prize.

Baron de Forest has written to the Chairman of the Aero Club respecting his prize of £4,000. The competition will be organised by the Aero Club, and the rules, which are now under consideration, will be published at an early date.

### Flying Ground at Le Touquet.

Members wishing to avail themselves of the flying grounds at Le Touquet are requested to communicate with the Secretary. The grounds are in every way suitable, and through the kindness of one of the members, Mr. A. P. Stoneham, will be placed at the disposal of any Member of the Aero Club.

### Shellbeach Flying Ground.

The Club House, Muscle Manor, is now open to members, and refreshments can be obtained there. Until the ground is being regularly used it is, however, advisable to send a telegram so that arrangements may be made. Telegrams should be addressed "Aero Club, Shellbeach, Eastchurch."

### Aero Club Year-Book.

The Year-Book, which will reach the Members in a few days, contains the rules governing the following prizes, &c. :

Aero Club prize for short flights.	£10,000 <i>Daily Mail</i> London to Manchester.
Aero Club Challenge Cup.	Mortimer Singer Plate.
British Empire Michelin Cup.	£1,000 <i>Daily Mail</i> One Mile Flight.
Gordon-Bennett Aeronautic Cup.	Hedges Butler Challenge Cup.
Gordon-Bennett Aviation Cup.	Llangattock Plate.
	Salomons Cup.

Members will also find particulars regarding the flying ground at Shellbeach, Aeronauts' Certificates, and Foreign Clubs. A List of Members will be found at the end of the book.

HAROLD E. PERRIN, Secretary.

The Aero Club of the United Kingdom,  
166, Piccadilly, W.



## THE GRAND PALAIS.

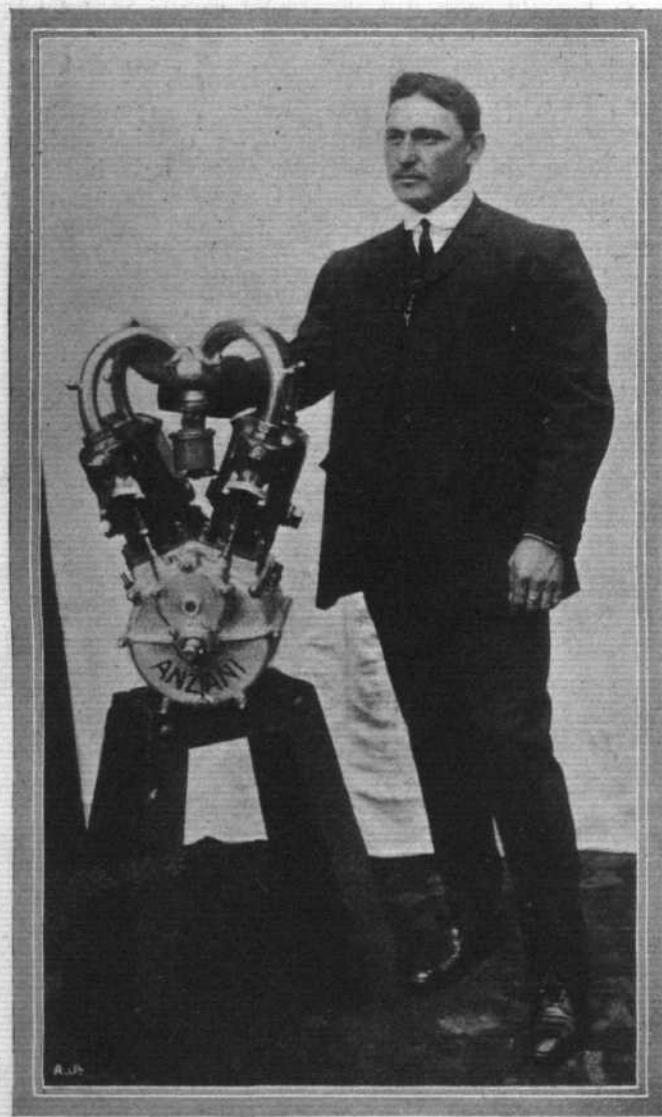
designed his flying ship in 1670, to the modern high-speed flyer, the present show at the Grand Palais affords an opportune display reminiscent of the leading incidents of this great work. There are innumerable old books and prints which take one back to the far-off ages when man had very little idea about physical laws, yet still aspired to fly; there are still more machines and models of machines on view to show the present state of the art since knowledge and pluck have brought success.

# M. BLERIOT'S CHANNEL FLIGHT— AND AFTER.

## Bleriot's Day.

BLERIOT has been having a royal reception in Paris, first by the Municipality at the Town Hall, next by the L.N.A., and then by the Aero Club, plus a banquet. According all honour possible to the great aviator, the Vice-Presidents and Secretaries of the Municipal Council actually went to Neuilly to fetch M. Bleriot in person to the Town Hall, where he was received by M. Chausse, the President, whose speech was followed amongst others by one from M. Lepine, the Prefect of Police.

Leaving the Town Hall, M. Bleriot made his way to the Ligue Nationale Aerienne, where he was presented with a Gold Medal; and in the evening the banquet in his honour given by the Aero Club of France took place at the Palais d'Orsay, where other Gold Medals were presented, one from the Aero Club of France, and one from the Automobile Club of France. Among those present who spoke on this great occasion, were M. Louis Barthou, Minister of Justice, M. Millerand, Minister of Public Works, and Mr. Roger Wallace, Chairman of the Aero Club of the U.K.



Anzani and his new motor. It was a standard 3-cylinder Anzani engine which was so largely responsible for M. Bleriot's feat of crossing the Channel successfully.

During the evening special honorary distinctions were announced by the Minister of Public Works as having been awarded to M. Anzani, the builder of the engine on the Bleriot flyer; to Chauviere, the designer of propellers; to Charles Voisin, the well-known constructor of flyers; to Emile Carton, an aeronaut and engineer; and to Eugene Hue, a maker of aeronautical instruments.

Another medal which was presented to M. Bleriot was given on behalf of the Encyclopedie de l'Aviation, and had been embellished with the aviator's effigy.

With regard to the monument which it is proposed to erect at Barraques, M. Mathis, the owner of the land, has intimated that he will give the necessary site.

## Bleriot at Juvisy.

ON Sunday, August 1st, M. Bleriot, accompanied by Madame Bleriot, visited Port Aviation at Juvisy, where they were received by the President of the Society of Encouragement of Flight, and by the Mayor of Juvisy. In honour of the occasion the principal avenue in the aerodrome was officially named "Avenue Bleriot," and Antonin Louis, the poet, sang his new song "Gloire à Bleriot."

## Gaudart Flies in Honour of Bleriot.

ABOUT half-past six in the evening a trial flight was also performed in Bleriot's honour by M. Gaudart, who flew round the track three times at altitudes of 30 metres, 50 metres, and 80 metres respectively. For this flight of 5 kiloms. in 7 mins. 14 secs. he gained the De Fontaine prize.

## "Bleriot XI" Bought in France.

THE short-span monoplane with which M. Bleriot flew the Channel has been bought by *Le Matin*, who are placing it at the disposal of the State. M. Bleriot very patriotically allowed his machine to be acquired for the sum of 10,000 frs., although he had refused ten times as much in England, and offers from other quarters.

## Congratulations from Model Aviators.

AMONG the hosts of congratulatory messages received by M. Bleriot on his successful conquering of the Channel passage, was one from the Blackpool and Fylde Model Aero Club.

## 120,000 Persons saw "Bleriot XI."

SOME idea of the great interest aroused by M. Bleriot's cross-Channel flight can be gleaned from the record of the number of people who visited Selfridge's during the first four days of last week for the purpose of inspecting the famous monoplane. Altogether they totalled 120,000, made up as follows:—Monday, 18,000; Tuesday, 26,000; Wednesday, 36,000; Thursday, 40,000. On Wednesday a party of Members of Parliament visited the store and spent a considerable time examining the machine. Apart from the apparatus itself, the visitors displayed great interest in a number of cards hung about the room on which were various extracts from FLIGHT recording the former doings of the monoplane.

## Bleriot Monoplane at the White City.

THOSE who were unable to see the Bleriot monoplane while it was at Selfridge's recently, had another opportunity of viewing it during the past week at the Shepherd's Bush Exhibition, where it has been the centre of attraction since Bank Holiday.

## SOMMER THE RECORD-BREAKER.

ONCE again the French record for duration of flight was beaten by Roger Sommer, flying a Farman biplane (Voisin type), at Chalons, on Sunday, August 1st, with a flight of 1 hr. 50m. 30s. Sommer, who, as our readers know, has only been flying for about two months, now stands second only to Wilbur Wright in respect of time. The distance travelled upon this occasion is estimated at 70 miles, and the average altitude about 80 feet. The start took place at 4.48 p.m. Henry Farman's longest flight, which took place on July 19th of this year, lasted 1 hr. 23 mins., to be beaten last week by Sommer with half a minute to the good, and on Sunday again with 27 mins. to spare.

There are still two recorded flights which are better than those of M. Sommer, namely, the two attempts made by Wilbur Wright last December for the Michelin Cup. The flight on December 18th, 1908, was 1 hr. 54 mins. 43 secs., while his best effort on the last day of the year was 2 hrs. 20 mins. 23 secs. The next best to M. Sommer's record was Wilbur Wright's flight of 1 hr. 31 mins. 25 secs. on September 21st, 1908.

On Monday last M. Sommer made a 9 mile cross-country journey from Bouy, occupying about 12 mins., which landed him at the village of Suippes, where the Mayor and Council had to stop their harvesting in order to officially welcome their strangely-arrived guest. M. Sommer chose an unconventionally early hour for his call, for he settled down at Suippes at 4.20 in the morning. Giving a couple of demonstration flights in the neighbourhood, Sommer restarted for home at ten o'clock in the morning, lost his way in a fog, and eventually reached his shed at a quarter past six in the evening.

The next day, after a new petrol tank had been fitted to the machine, M. Sommer made a flight lasting 18 mins.



## WRIGHTS SATISFY U.S.A. GOVERNMENT.

At last the Wright brothers, after a series of delays, have satisfied the U.S.A. Government in respect to their flyer, and are to receive a sum of 30,000 dols. which is inclusive of a bonus of 5,000 dols., the latter as the result of the trial speed being in excess of the specified rate.

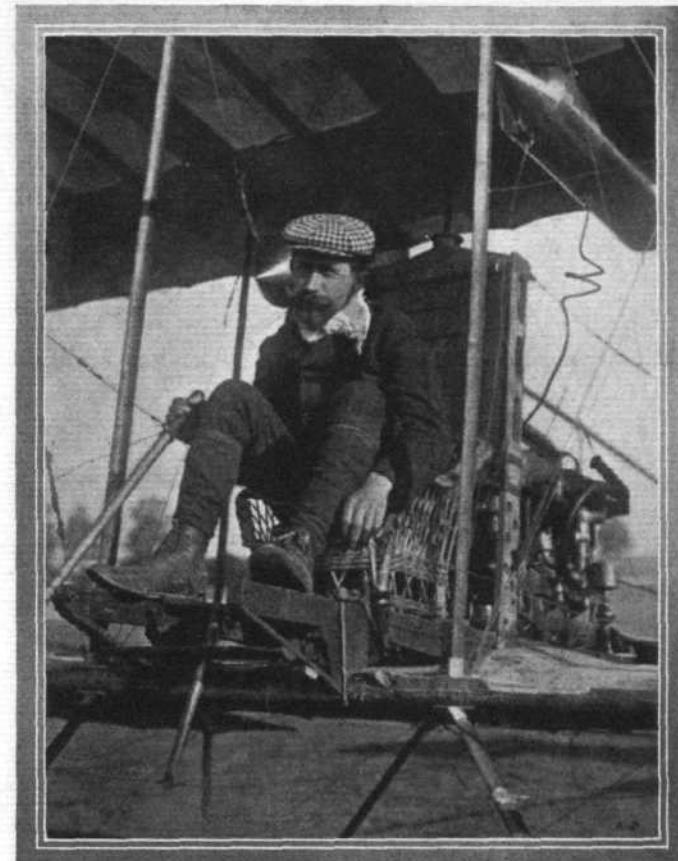
Last week we recorded the first big test required, the final test being a continuous flight of 5 miles out and 5 miles back, and this Orville Wright accomplished with Lieut. Foulois as a passenger on Friday, July 30th, in the official time of 14 mins. 42 secs. The altitude during the flight was at least 200 ft., and the trial throughout was a splendid achievement.

After starting with the ease and grace associated with the Wright machine, Orville Wright began with a preliminary manœuvre of ascent by circling the Fort Myer drill ground three times. He then flew out to the turning point at Alexandria five miles distant, and successfully taking the bend, flew back home without incident. The official speeds for the journey are given as 37 miles an hour out and 47 miles an hour home,



## AN INTERNATIONAL CONFERENCE.

LAST week, Mr. Pike Pease asked the Prime Minister whether, in view of the strides recently made in the science, he would summon an International Conference to consider the question of aviation. Mr. Asquith



M. Sommer, who, last week, at Chalons, on a Farman biplane, beat the French duration record by flying for 1 hour 50 minutes, the next day making a cross-country flight to Suippes, a distance of 9 miles.



## WRIGHTS SATISFY U.S.A. GOVERNMENT.

thus making an average of 42 miles an hour, which is 2 miles in excess of the minimum speed required. The exact turning point was Shuter's Hill in Alexandria, and the flight started at 6.45 p.m.

Prior to the event much disappointment was felt on account of the delay necessitated by the strong winds, and on the Wednesday evening, July 28th, a crowd of 10,000 spectators were only told that the event would be off a few minutes before 8 p.m., when the Wrights asked for an extension of three days. On Thursday the conditions were still unfavourable, and it was therefore not until Friday that they were able to make an attempt. One of the principal causes in the delay in getting the machine together is attributed by the Wrights to the damage sustained by their engine in railway transport from Dayton to Washington.

### Herring Extension Refused.

HERRING's request for an extension of time in which to prepare his flyer for the Government contract has, it is reported, been refused by General Allen.



said that the matter was being closely watched by the Government, but as at present advised he could not see that any practical purpose would be served by summoning such a Conference.

# AVIATION NOTES OF THE WEEK.

## Boulogne-Folkestone Return Prize.

It is proposed to offer a prize of 1,000 guineas for the aviator who first flies from Boulogne to Folkestone and back, £800 of this sum to be put up jointly by the municipalities, while £250 will come from Mr. Forsyth, ex-Councillor of Folkestone, who, however, stipulates that the landing must take place in the gardens attached to the Folkestone Victoria Pier. The event is to be organised for September, and is restricted to that month, but the successful pilot will be allowed a month in which to make a return passage.

## Ostend Meeting.

FROM the first of this month to October 1st a sum of 25,000 francs is available at Ostend, for the first pilot who makes an hour's flight between the Kursaal and the Estacade. The distance between these two places is about 800 metres, and the event is being organised by the Belgian Aero Club.

## Deauville 1910 Meeting.

THERE is talk of organising an important meeting at Deauville for August next year, to include a cross-Channel flight from England with a landing at Havre.

## The Dunkirk Meeting.

FOR the aviation meeting which is to be held at Dunkirk from the 5th to the 20th inst., three competitions have been arranged. The biggest prize, 6,000 francs, is that offered for the machine which remains the longest time in the air, traversing meanwhile a circuit of 2 kiloms. round. A prize of 2,000 francs is offered for the best time over a 16 kilom. course from Malo-les-Bains. The third prize is of 1,000 francs for the greatest height flown. In addition, prizes of 500 francs each will be given to the first four aviators who fly for 1 kilom. in a closed circuit.

## Competition at Verdun.

THE authorities of Verdun-sur-Meuse have put up a prize of 4,000 fr. to be awarded during the early part of September for flights over the racecourse.

## Meeting at Tournay.

A FLIGHT Committee having been formed at Tournay, with a municipal subsidy of 5,000 francs, the organisation of a meeting to take place in September is to be attempted. Paulhan is expected to fly on this occasion. Colonel de Stein d'Altenstein is the Honorary President of the meeting, which is in the hands of influential men.

## Brescia Meeting.

JUST a reminder that from the 5th to the 20th of September the Brescia Meeting will be held at Campagna on a ground situated about a mile from the town of Brescia. Prizes to the value of £3,400 will be available for competitors, and a valuable silver cup has been presented by the Mayor of Milan. The meeting, if it is successful, should be of more than usual interest, inasmuch as the competitions cover classes for dirigibles as well as flyers. The Brescia Grand Prix goes to the flyer which wins the 100 kiloms. speed race. There is another prize for speed at an altitude exceeding 230 feet, and yet another for a passenger race. Among the more special events is a prize for getting off the ground without

special mechanical means. Count Oldofredi has offered £120 for the fastest kilometre flight made by an entirely Italian machine.

## Rheims Meeting.

OF thirty-five garages which are being erected for flyers in connection with the Rheims Meeting, which opens on August 22nd, thirteen are already finished and the remainder are expected to be ready in good time.

## Curtiss and the Gordon-Bennett Aviation Cup.

ABOUT the 11th of August Curtiss is expected in France from America. In the meantime the President of the American Aero Club, who is in Paris, has stated that Mr. Curtiss certainly intends to participate in all the principal flying contests of the year. Last week Curtiss sent in his entry for the Brescia Meeting, and on the 5th of this month he set sail on the "Savoie" to be in time for the Rheims Meeting.

## The "Silver Dart" Damaged.

THE Canadian aeroplane, "Silver Dart," which has been thoroughly overhauled and fitted with a new six-cylinder engine, was slightly damaged at Petewawa on Bank Holiday, while landing after an otherwise successful flight, in which two passengers had been carried at a speed of 40 miles an hour. It is stated that Mr. McCurdy, who was in charge, was momentarily blinded by the brilliant sun, and brought the machine too close to earth, the right wing striking a little hillock and being injured. Altogether four flights, each of about a mile in length, were made. "Baddeck I" is the name of the flyer which will probably supersede the "Silver Dart" while it is being repaired.

## Fenaille Glides at Angers.

RAISED by being towed by a car running at 60 kiloms. an hour, Fenaille succeeded in executing several gliding flights, including one of 250 metres, at a height of 20 metres, on a biplane glider of the Chanute type. The event took place on July 30th, the venue being the Derée Plains, near Angers. The apparatus has been constructed by M. Jean Bedonet, at Derée, and is fitted with a tail-fan arrangement for warping the wings. The lifting surface is 14 square metres.

## Flight in Russia.

M. VAN DER SCHKROUFF has made his first trial flight on the Voisin type of biplane owned by the Aero Club of Odessa. He succeeded in covering about 80 metres while flying close to the ground, but came to earth in attempting a turning.

## Teaching the Young Idea in Russia.

THE President of the Council has proposed to the Minister of Industry that all technical schools should include a course of aeronautics. This suggestion will be first put into effect at the St. Petersburg Institute.

## Count Cournet Progresses.

OUR readers will remember that on June 20th one of the visitors to Juvisy, Count de Cournet, was so impressed with Delagrange's flying that he promptly bought the aeroplane, and, ignoring the advice of his friends, proceeded to attempt to fly, with disastrous results. Since then he has been making himself thoroughly acquainted with his Voisin machine, and on

Monday last made a couple of circuits of the Juvisy course with perfect ease, and appeared to have his machine under complete control.

#### Flight in Holland.

REFERRING to M. Le Fèvre's demonstrations in Holland, mentioned last week, one of our readers at The Hague sends us the following details:—

"A young French engineer, Monsieur Le Fèvre, is at present making some interesting trial flights on a Wright aeroplane in the Polders, some fields which were placed at the disposal of the committee who are organising the exhibition, by a well-known Dutch sportsman. Unfortunately the weather has been very much against aerial navigation, but in spite of adverse elements, M. Le Fèvre made a splendid flight of several kiloms. on Friday evening, July 30th. After a four hours' wait on account of wind, the machine was taken out of its shed, placed in position, and the spectators were rewarded by seeing it rush with a whirr down the rail and rise in the air like a bird. The aviator made for a clump of trees over which he passed into the adjoining field, around which he circled in a wide sweep, returning in grand style to the place of departure, where he was vociferously cheered. Instead of descending, he attempted another round, but on the way back the motor stopped and he came to the ground without the slightest shock. There are always great difficulties in the way of getting the aeroplane back to its shed should it come down at any distance away on account of the numerous wide ditches which intersect fields in Holland in every direction. The first time M. Le Fèvre was out he fell into one of these, and the machine was extricated with difficulty. A large stand has been erected in the field, and the organising committee hoped to have had many visitors to their aerial exhibition, but up to now the weather conditions seem more favourable to swimming

than to flying, the field being under water owing to the abnormal quantity of rain for the time of year."

On Wednesday M. Le Fèvre made two flights, the first being witnessed by the Prince Consort, who congratulated the aviator, and displayed a lively interest in the working of the flyer, as it was explained to His Royal Highness by M. Le Fèvre.

#### First Flight in Sweden.

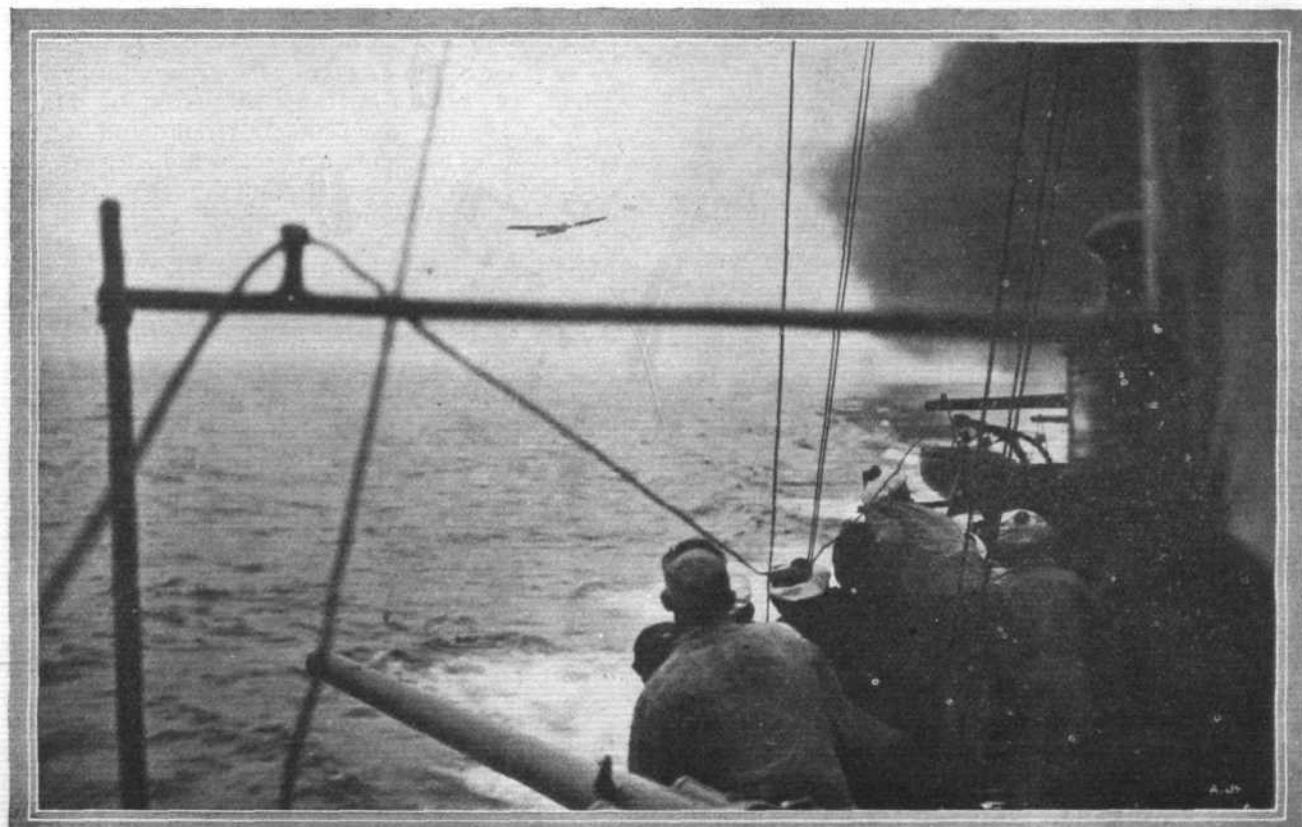
SWEDEN now has its flying man, and on Tuesday the first recorded flight in a heavier-than-air machine over Swedish soil was accomplished. Mounted on a Voisin machine, Folmer Hansen, who, it will be remembered, has been practising at Issy and Juvisy, succeeded in making two short flights at Stockholm. The first was of three minutes and the second of two and a half minutes, and the 20,000 spectators who had gathered to see the proceedings loudly cheered the aviator on his success.

#### Honour for Mr. Latham.

THE Worshipful Company of Clothworkers, of which Mr. Latham's great grandfather, Mr. Thomas Latham, was Master during 1810 and 1811, have conferred the freedom of their company *honoris causa* upon the plucky pilot of the Antoinette monoplane.

#### Latham to Take a Passenger.

DEPRIVED of any immediate chance of a prize for a solo flight across the Channel, amongst the many conflicting rumours afloat, Mr. Latham now purposes, it is stated, taking a passenger so as to comply with the conditions under which M. Deutsch de la Meurthe offered £1,000 some little while ago. The passenger in question, as our readers may remember, however, has got to be Colonel Renard, and we have not yet heard that the invitation, if issued, has been accepted.



HUBERT LATHAM'S SECOND CHANNEL ATTEMPT.—The aviator overtaking the French torpedo-destroyer "Escopette" soon after leaving the French coast, which can be discerned dimly in the distance.

## Rougier at Issy.

ANOTHER newcomer at Issy has appeared in the person of Rougier on his Voisin biplane.

## Witzig-Dutilleul Flyer.

AFTER considerable alterations, the Witzig flyer has been got going again at Issy, in the hands of Busson, who succeeded in accomplishing 250 metres in his second attempt on Wednesday of last week, July 28th.

## A Monoplane at Bristol.

FROM Bristol comes the news that Mr. Christopher Pride, of Fishponds, has been successfully experimenting with a monoplane of his own invention. He has made wagers to make a flight in the West of England, and intends to try and win Baron de Forest's prize of £4,000 for a cross-Channel flight.

The machine, complete, weighs 684 lbs., it is 32 ft. 8 ins. long, and is fitted with a 50-h.p. engine. The best experimental flight up to the present was one of 976 yards in 1 min. 19 secs., which was only ended owing to the aviator's difficulty in avoiding a tree.

## A Bleriot Monoplane Wanted for Blackpool.

WE understand that one of Blackpool's worthy Councillors, who has a reputation for keeping abreast of the times, has an ambition to cruise in the central blue. He is endeavouring to secure a Bleriot monoplane, and, if money can buy one, Blackpool should soon be a centre for monoplane experiments.

## Plazzeriaud Triplane.

A NEW triplane is being built at Zurich by M. Plazzeriaud, and its design is mainly remarkable for the low position of the centre of gravity, which is situated rather beneath the supporting surfaces. It is hoped in this way to ensure great stability, but we might remark that opinions differ on the advantage of this principle, as although the idea sounds all right, it is supposed by many that there would be great practical difficulties in the control of a machine having the centre of gravity much underhung.

## The Parseval Flyer.

A SUBSIDY of 250,000 marks has been promised to enable Major von Parseval to investigate the problem of a practical flyer for the German Army. Major Parseval, as our readers know, already has a monoplane under construction. This machine has a surface of 40 square metres, and is designed for three or four passengers. The engine intended for use is rated at 40-h.p., and the weight of the machine is estimated at 1,000 kilogs. Preliminary trials are expected to take place on the Lake of Plau.

## Another French Biplane.

IN a few days experiments will be commenced with a biplane which has been constructed in the works of M. Landé, at Libourne, and is now nearly completed. It is to be fitted with a Motobloc engine, and will be tried over the camp of St. Laurent-des-Combés, about 10 kiloms. from Libourne.

## An Aeroplane at Verdun.

An aeroplane which has been designed and built by M. Maurice Beaufest, a soldier of the third regiment of Engineers, will shortly be experimented with on the Escargot military ground. It has been built in a little workshop at Belleville, near Verdun, and the liveliest

interest is being taken in its progress by Beaufest's commanding officers, who are giving him all facilities in their power. It is hoped that the machine will be able to make some flights on September 6th, when festivities will be in progress in connection with the unveiling of a monument commemorating the successful defence of the town.

## Bleriot on the Bordeaux-Paris Race.

SPEAKING to our contemporary, *L'Auto*, on the subject of their Bordeaux-Paris flying event, M. Bleriot is reported to have prognosticated a large entry list, and has stated that Leblanc would enter a Bleriot flyer as No. 1.

## £5,000 for an Aeroplane Race.

ALTHOUGH there is practically no possibility of such an event taking place, the President of the Yukon Exposition, which is now open, has offered a prize of £5,000 for a race between the Wright Brothers and M. Bleriot.

## De Caters Undertakes to Fly.

BARON DE CATERS has undertaken to make ten flights at the Frankfort Exhibition, starting on August 5th. Several short flights were made by the Baron on his Voisin biplane at Issy on Tuesday.

## More Channel Flights.

IT is regarded in France as reasonably certain that further attempts on the Channel will be made next month; in the meantime, Count de Lambert is in Paris, while the torpedo destroyers have been ordered back to their stations.

## M. Fordyce Honoured.

IN addition to the prominent aviators who, as we announced last week, have been honoured with the Cross of the Legion of Honour, M. Arnold Fordyce, the journalist on the staff of the *Journal*, has since been made a Chevalier of the Legion by the French Minister of War. This is as a reward for the part played by M. Fordyce in "discovering" the Brothers Wright, and bringing their performances to the notice of the Minister of War. He also played a prominent part in the negotiations for the visit of Wilbur Wright to France.

## M. Bleriot Busy.

IT is announced that M. Bleriot has undertaken to deliver thirty-six monoplanes between now and the beginning of November. The price has been fixed at £400 each, but it is reported that several of the clients in their eagerness to secure early delivery are offering high premiums. The first will be delivered to M. Alfred Leblanc.

On Tuesday, M. Bleriot made a trial with the first of the duplicates of his "No. XI" monoplane. The flights were, however, very short, as the rudders were not regulated properly, and M. Bleriot still suffers a good deal of pain from his foot.

## "Avenue Bleriot," Juvisy.

THE Société d'Encouragement à l'Aviation decided to honour M. Bleriot by presenting a gold medal to him, and they have also resolved to confer a more lasting honour upon their illustrious member by naming the road which leads to the Juvisy Aerodrome "Avenue Bleriot."

# AIRSHIP AND BALLOON NEWS.

## Zeppelin Sails to Frankfort.

THE Friedrichshafen to Frankfort journey has been successfully accomplished by "Zeppelin II" since its repair consequent upon the damage occasioned by its last landing in the country, when, as will be remembered, the front part of the framework was buckled by collision with a tree. The undertaking on the present occasion was a plucky and successful attempt to prevail against serious odds, for the weather was far from good; sufficiently bad at any rate to keep "Parseval III" indoors. A storm of considerable violence broke over Lake Constance and its floating shed just before the start, but, although relative calm followed, a strong south-west breeze remained. Heading in a northerly direction under these favourable conditions, a very high speed, estimated at over 60 miles an hour, was accomplished, but later, with the bows turned west, it became difficult for the airship even to hold its own. Starting at about 3.20 a.m., Ulm was passed at 6.15 a.m., Cannstadt at 9.45. At Gesslinger she was stationary for 25 minutes, afterwards passing over Heilbron at 10.45, reaching Heidelberg at 12.30 p.m. By 2 p.m. she was over Darmstadt, her destination at Frankfort being reached about 3 p.m. Owing to the elaborate arrangements which had been made for its reception, the airship was anchored without damage, the anchorage consisting of tramway rails sunk in the earth. Her average speed was about 30 m.p.h. Frankfort is merely the first halt on the way to Cologne, which is to be the permanent military station for "Zeppelin II," which has now been acquired by the German War Office.

One of the incidents of the journey was a hailstorm near Stuttgart, out of which the airship was manœuvred by ascent. At Heidelberg, one of the more notable places passed *en route*, the contrast of the old and new moved none more than the aged Count himself, who saw beneath him one of the greatest monuments of Germany's historical romance from a position which could only have been visionary to those who lived in the days of the great castle's glory. The highest altitude attained in the voyage was about 3,000 ft.; eight persons were on board.

On Monday, August 2nd, the remainder of the journey to Cologne was attempted, but the weather proved too much for the airship, which had to put back into Frankfort, reaching the Exhibition grounds at 8.45 p.m. During this attempt the airship was sighted struggling against the weather at Rolandseck, Oberwinter, and Coblenz.

A second attempt was made to carry out the journey on Tuesday morning, August 3rd, the airship leaving its moorings at Frankfort at 10 o'clock, ascending to an altitude of about 50 metres. Almost immediately, however, an accident happened to one of the propellers, which was broken in mid-air and fell to the ground. A descent was determined upon forthwith to effect repairs, for although the airship could progress slowly with the rest of its machinery, there was no point in taking the added risk. The descent back to the Exhibition grounds was successfully accomplished, and work started immediately on repairs which it is thought will occupy about two days.

## "Gross II" for the Manœuvres.

IT has been announced that "Gross II" will participate in the Wurtemburg manœuvres, and that a

new portable shed will be used as a garage on that occasion. Practice in erecting the shed, which needs 75 men under one officer and five non-coms., was to take place on the Tempelhofer Feld, Berlin, this week. The headquarters of "Gross II" during the manœuvres will be at Hall.

## Engines for the National Airship.

FOLLOWING on the announcement that British constructors would be given an opportunity of tendering for the motors required for the Lebaudy airship which is to be purchased by the *Morning Post* Fund, several firms have taken the matter up. Prominent among these are the Wolseley Tool and Motor Car Co., Ltd., Messrs. S. F. Edge, Ltd., and Messrs. J. W. Brooke and Co., Ltd., and all three firms are making an effort to secure the contract for Great Britain.

## French Government Airship Prizes.

RULES have been drawn up by the Aero Club of France relating to three prizes which the French Government have awarded for dirigibles. These, as our readers know, are the Meusnier Prize, of 4,000 fr., for the longest journey between towns without descent or refilling, the Giffard Prize, also of 4,000 fr., for the longest journey in a closed circuit under similar conditions, and the Dupuy de Lôme Prize of 2,000 fr., for the highest speed on a closed circuit of 50 kiloms., also without descent or refilling.

## "Belgique" Flies over Brussels.

ON Wednesday evening, at Brussels, M. Robert Goldschmidt made another trial with his dirigible "Belgique," and carried out a number of evolutions over the city. Several times the airship circled round the Hotel de Ville, and the huge crowds which watched the flight became very enthusiastic, and loudly cheered the owner.

## Belgian Dirigibles.

THE good behaviour of the dirigible "Belgique" has stimulated aerial interest in that country. The town of Brussels, in conjunction with the Minister of War, are putting up a shed, in the vicinity of the capital, costing 125,000 frs. A second Belgian dirigible is at present under construction, and a third, to be called "La Flandre," has been decided on.

## The Russian Dirigibles.

THE new airship dock which has been built near St. Petersburg has now been completed, the cost being about £12,000. In measures about 240 ft. in length and 100 ft. in height.

"Lebed" is the name bestowed on the Lebaudy airship which was temporarily yclept "Russe," which has now been delivered, and will commence its trial flights next month. In the meantime, several flights have been made with the "Uchebay," which has been constructed at the Russian balloon factory out of old materials.

The Wright flyer ordered by the St. Petersburg Aero Club is expected shortly, while Tatarinoff expects to begin trials with his new machine next month.

## A Long Flight by "Republique."

ON Wednesday a long trial was carried out with the new French military dirigible "Republique" over the course arranged for the Deutsch Prize. The dirigible,

under the command of Capt. Bois, left its shed at Chalais Mendon at 7.30 a.m., and passing over St. Germain, Senlis, Meaux, Melun, and Corbeil, regained its shed at Chalais Mendon at 1.30 p.m., the 130 mile journey having occupied six hours, during which there was not the slightest mishap.

#### Another Italian Dirigible.

ON Thursday last week a new dirigible, which has been built close to Milan, was given its first trial. It has been built by the Engineer Forlanini, who has done a lot of research work with hydroplanes. The airship is 130 ft. in length, 78 ft. in diameter, and it is stated that its speed was 30 miles an hour. It weighs 3 tons, and cost £20,000. The propeller is situated at the forward end of the car, and so is the steering apparatus, which consists of a cellular aeroplane. The airship is of the semi-rigid type.

#### Zeppelin at Tussaud's.

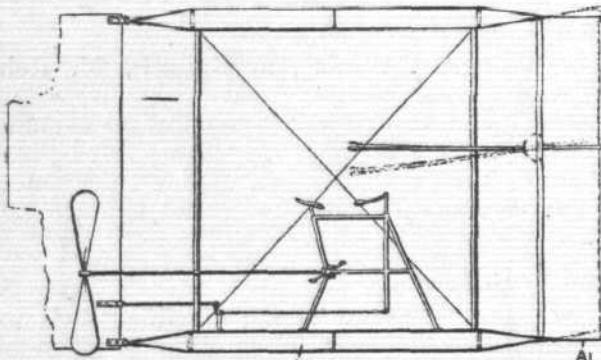
MADAME TUSSAUD'S EXHIBITION, that ever up-to-date court of effigies, has just inaugurated a new section devoted to models of great men in aeronautics and flight. The first is Count Zeppelin, and models of the Wright Brothers are expected to arrive shortly.



### INVENTORS' IDEAS.

#### BUOYANT AEROPLANE.

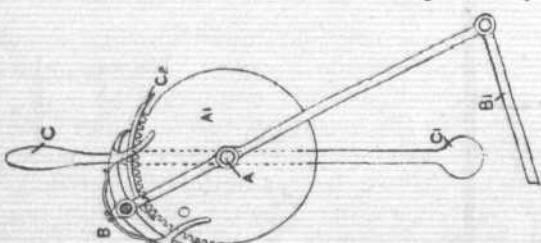
THIS patent describes the construction of an aeroplane in such a manner that it shall be buoyant, by the use of gas-bags enclosed within the decks, A, which are made hollow and of sufficient depth



to receive them. The construction of the aeroplane, according to this patent, also provides for the use of a hinged leading edge to serve the purpose of an elevator.—No. 771 of 1909. Todd, Churchill Woodworth.

#### AUTOMATIC CONTROL LEVER.

THIS is a control lever, for use on a flying machine, which is designed so that it can be operated automatically or by hand. The design illustrated is applicable to the operation, by partial rotation in either direction, of a spindle, A, by means of a toothed wheel, A<sup>1</sup>, fastened to it. The toothed wheel is in turn operated by a pawl



mechanism, B, controlled from the connecting-rod, B<sup>1</sup>, by any suitable mechanism. On the spindle, A, is a pivoted lever, C, fitted with a pendulum-balance weight, C<sup>1</sup>, so that it always remains vertical. This lever carries a guard-plate, C<sup>2</sup>, so arranged that its position determines which of the two pawls combined in the

#### America Probably Out of the Balloon G.B.

TELEGRAMS have been received to the effect that there will be no American representative in the Gordon-Bennett Balloon Race, which starts from Zurich on the 23rd. Reasons for their absence have not yet been given, and, moreover, later advice states that Mr. E. W. Mix will start as American representative.

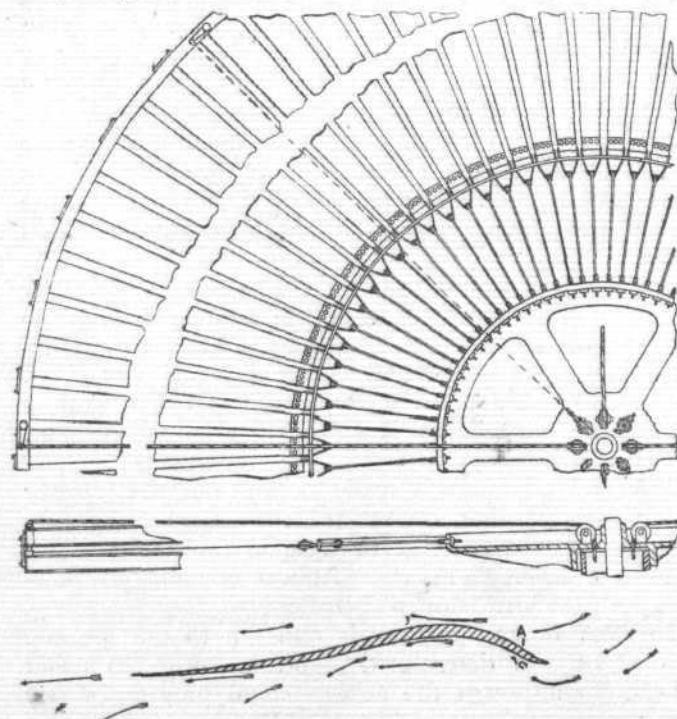
#### Ballooning from Cowes.

ON Wednesday afternoon some surprise was caused by the appearance of a balloon over Cowes during the yacht racing. It transpired that Mr. Pollock and Mr. Singer had determined to fulfil a long-expressed desire to cross from the Isle of Wight to the mainland; and, starting from the Cowes Gasworks at half-past two, they landed at Rowlands Castle half-an-hour later. Their passage was watched with interest by the large crowds on sea and land, and the Russian Royal children were especially entertained, as it was said to be the first time they had seen a balloon in motion. Under all conditions it is hardly surprising to learn that, until the identity of the voyagers was ascertained, a certain amount of alarm was felt by those watching the safety of the Czar, as the balloon passed over the Royal yachts.



#### MULTI-BLADE HELICOPTER.

THE principle described is a lifting-screw having numerous thin blades held in place between rings forming their inner and outer peripheries by means of adjustable ties, so that they are subjected to considerable tension, and are thus rendered stiff without the use of heavy fittings.



The invention also covers apparatus for altering the angle of inclination of the blades from zero to a maximum, and suggests the use of the device when the blades have zero pitch as a gyroscope.

Another claim in the invention covers the use of blades of double curvature in the vicinity of leading edge. The inventor refers to this as the Lilienthal curve, A.—No. 13,809 of 1908. Christian Lorenzen.

## AERONAUTIC INSTRUCTION IN LONDON.

AT their last meeting before the autumn recess the Education Committee of the London County Council considered the report of a sub-committee in which were the proposals of various institutions to commence courses of instruction in aeronautics. The proposal of the Northampton Institute was approved for the coming session on the condition that the expenditure did not exceed £100 for the session. The courses at the Regent Street Polytechnic and the Imperial College of Science and Technology are still receiving the attention of the sub-committee. In view of the large possible development of this branch of instruction, and the costliness of the necessary plant, the fullest consideration of the Council will be given to all such proposals, with a view to their co-ordination. It is felt that lectures of a pioneer character, however, will do a large amount of good.



## CORRESPONDENCE.

*\*\* The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.*

### ANOTHER PROPELLER CHALLENGE.

*To the Editor of FLIGHT.*

SIR,—Referring to my challenge, and thanking Mr. H. Page for his reply to the same, I note that the three machines quoted all have twin propulsion, the propeller diameters being 6 ft. 6 in. and 7 ft. respectively.

Now, I did not contemplate entering twin-propellers for this contest, and I should be glad to learn whether Mr. Page can give me the option of a monoplane with single screw, preferably a tractor? The size of tractor I propose entering is my standard 2-metres diameter, and the same size if a propeller.

I stipulate that in any case an approved form of dynamometer be applied for reliably measuring the thrust *during flight*.

Sir H. Maxim found (and published the fact) that the static and the travelling thrust were practically the same. Let us then see what this contest demonstrates.

I should be glad to know the expected dates of completion of the machines.

Yours faithfully,  
SIDNEY H. HOLLANDS.

*To the Editor of FLIGHT.*

SIR,—I am very pleased to see Mr. Sidney H. Hollands has thrown down the gauntlet for large-sized efficient propellers, and I am glad to see that Messrs. Handley Page have taken it up, as there are many people on the look-out for the most efficient propeller on the market. I am building two large-sized high-speed propellers 5 ft. by  $5\frac{1}{2}$  ft. in diameter, and in the event of the "Hollands" vanquishing the "Handley Page," or vice versa, I hope the victor will consider my humble effort worthy of his steel by running his propeller against my 5 ft. one. It is interesting to note that the acceptors of my challenge who "came up to the scratch" are practical engineers, and that the first order I received for a large-sized propeller was from a member of the largest firm of engineers in Rugby.

Yours faithfully,  
WILLIAM COCHRANE.

### A WRIGHT QUERY—CONSTRUCTION AND ACTION.

*To the Editor of FLIGHT.*

SIR,—I am making a model of a Wright biplane, but all the drawings and photos I can obtain do not show clearly how the two front planes for horizontal steering are moved by the rod, which terminates in a lever in the pilot's hand.

Is the front end of this rod fastened to a sliding pivot? It is obvious that it cannot be secured direct on to the upright between the front-planes, as these are hinged—I presume—on to the upturned end of the skates.

If you could give me a rough sketch showing the method of working these planes backwards and forwards, I should be very much obliged.

Also, will you please say if it is necessary for the biplane to start *against* the wind; if this is so, when returning *with* the wind to the

## BRITISH MADE FABRIC.

THE North British Rubber Co., Ltd., send us one of their price lists of indiarubber proofed aeroplane and balloon fabrics, and the company claim to be the first British house that is able to offer a range of scientifically produced fabrics suitable for aeronautical purposes. Before putting their productions on the market, the company have thoroughly satisfied themselves as to their suitability by carrying out numerous chemical and physical tests.

All forms of rubber articles are manufactured by them, but their specialities in aeronautical requirements are a No. 1 balloon fabric 36 in. wide, weighing about  $9\frac{1}{2}$  ozs. per sq. yard, and Nos. 1, 2 and 3 aeroplane fabrics of varying qualities each 36 ins. wide, the weight varying from  $4\frac{1}{2}$  to  $4\frac{3}{4}$  ozs. per sq. yard. The No. 2 aeroplane fabric will stand a strain of 3,000 lbs. warp and 2,400 lbs. weft per yard.



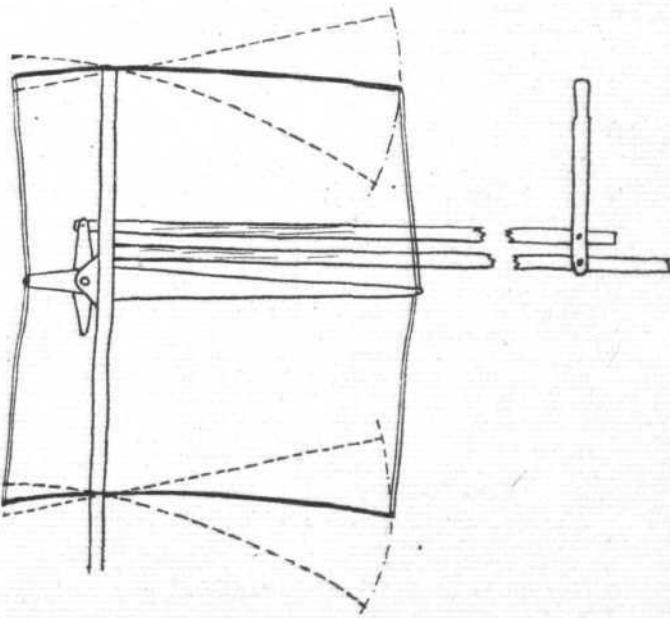
starting-point, must the aeroplane travel at a greater speed than the wind?

For example, with a 25-mile-an-hour wind blowing, would it be necessary for an aeroplane, running *with* the wind, to travel at, say, 30 miles an hour? Would the same conditions also apply to a monoplane?

Please excuse me for trespassing upon your time in this manner, but I have tried to obtain this information from books, &c., in my possession, and have failed to find exactly what I require. In conclusion, let me wish FLIGHT (of which I have been an interested reader since the commencement) every success; and I trust you will see your way, from time to time, to continue giving useful hints to amateur model makers. Thanking you in anticipation.

Yours faithfully,  
VIVIAN B. LEAROYD.

[The Wright flyers are now being constructed with the flexing or warping elevator described in FLIGHT, vol. I, p. 82, but the actual control is still carried out by a lever and wooden rod (see sketch). This lever does precisely what the rope illustrated in the patent



drawing on p. 82 accomplishes, that is to say, it is connected to a small arm having the same radius as the pulley wheel.

With reference to the question of relative wind velocities, flight must always be considered as taking place through the air and relative to the air. Hence if a relative speed of 30 miles an hour is necessary to sustain flight, the machine must always travel through the wind so as to produce this difference in speed across its supporting surfaces. In a head wind of 30 miles an hour, it could stay aloft without moving over the ground at all, but if travelling *with* the wind it would have to travel at 60 miles an hour in order to create the difference necessary for support. From this point of view it would generally be preferable to start and finish against the wind,

firstly in order to avoid a long run (which with the Wright flyer is limited by the starting-rail), and secondly in order to avoid regaining the ground at an unnecessarily high speed.

The above considerations only take into account horizontal winds dead ahead and dead astern. Horizontal winds blowing obliquely have to be considered in respect to their resultant in the direction of flight. Winds with an upward trend, by contributing independently to the lift of the machine, are a case apart.

It is sometimes asked, can a flyer travel with the wind slower than the wind? This is only possible by heading against the wind, under conditions such that the thrust of the propellers is sufficient to maintain the necessary velocity for flight through the air, but is yet inadequate to fully overcome the drifting effect, relative to earth, of the wind on the machine; in other words, the flyer is being blown back while trying to advance. It is very instructive in this connection to watch the flight of birds on a windy day in open country near the sea, and to observe the tremendous velocity they acquire directly they turn tail to the wind after they have been trying their utmost to fly against it.—ED.]

## AN ODE TO AVIATORS.

To the Editor of FLIGHT.

SIR,—As one of the large army of (unengined) inventors for long interested in the problem of flight, I venture to contribute the enclosed, one of those brilliant (?) inspirations which, if it does not assist others to fly, may at least help them to flee.

Yours truly,  
Southsea.  
PERCY A. K. BROCK.

It was the Frenchman Bleriot  
Who scorned to take the Ferry O,  
But climbed forthwith into his monoplane.  
He did not make a rumpus,  
He did not take a compass,  
Or e'en a stout umbrella should it rain.  
Oh! this historic sally,  
From the neighbourhood of Calais,  
Was certainly what folks call "Pretty Fly";  
To get twice half-seas over,  
And then tell the Port of Dover,  
"Doveriah, Doveriah, I am dry."  
It is neither stuff nor blarney,  
Monsieur Bleriot's Anzani;  
His pluck, and will, and luck, and other things,  
With just-mentioned gem of motors,  
Helped him soar above the bloaters,  
Triumphantly to England upon wings.  
This man, who does not boast  
When he first descried our coast,  
Proved his word to be his bond for woe or weal;  
And by virtue of this rule,  
Scooped the profit of the pool,  
While refusing to be tempted by a Deal.  
It has since appeared in print,  
A policeman made a sprint,  
To receive the man who did the very best;  
And the peeler did not dim it,  
With a lecture on speed limit,  
Though he may have said, "It's time, sir, for a rest."  
Poor Latham, all have said it,  
Deserves the fullest credit  
And sympathy for troubles on his flights;  
And all aviation songs  
Would be radically wrongs,  
If they failed to somewhere touch upon the Wrights.  
Be the day a rough or calm un,  
Here's a toast to Henry Farman,  
Who has English somewhere lurking in his veins;  
And any who find fun in  
My excruciating punning  
May pass to the deserving what remains.  
But we all must give to Bleriot,  
Who would not take the Ferry O,  
And left a fast destroyer on a run,  
This fame-emblazoned panel—  
Louis Bleriot flew the Channel—  
What no man on earth before had ever done.

## AEROPLANE PROPELLER TEST.

To the Editor of FLIGHT.

SIR,—With reference to the test of aeroplane propellers in your Journal, these tests do not seem to me to be at all practical or conclusive. It is quite evident that to obtain a fair result the speeds should be varied to suit each type of propeller, and we therefore

propose that another test should be made with larger propellers, of say, 24 ins., 38 ins., or even 84 ins. We will provide the propellers and motors of a proper speed to drive them, and our competitors should provide their own. Will you kindly act as judge?

Yours faithfully,  
THE WATFORD ENGINEERING WORKS.

## CROSS-CHANNEL BALLOONING — MR. P. SOUVESTRE'S TABLE.

To the Editor of FLIGHT.

SIR,—You published in FLIGHT on 17th July an incomplete account of over-sea balloon voyages.

Do you consider the two following unworthy of recording.  
Maldon to Arras. J. Simmons. June 11th, 1882, when I broke my leg. 12 minutes crossing the Channel.

Maldon to Flushing. J. Simmons and myself. July 31st, 1883. The first time, and I believe the last, that a balloon ever started from England and landed in Holland. Yours faithfully,

CLAUDE CHAMPION DE CRESPIGNY, BART.

[We are glad to have Sir Claude Champion de Crespigny's additions to Mr. Souvestre's table. Thus by the help of our readers we shall hope to obtain a really complete list, when we shall re-publish it in amended form.—ED.]

## FABRICS FOR AEROPLANES.

To the Editor of FLIGHT.

SIR,—It would interest me, and possibly many others, to hear of an aeroplane fabric which is manufactured in our own country, and which is reasonable in price.

The regulations governing certain competitions demand that the competing machines should be English. Yours faithfully,

S.

P.S.—I am waiting for a high-class material to cover the planes of my machine.



## NEW COMPANIES REGISTERED.

Lester-Best Airship, Ltd., 143, Cannon Street, E.C.—Capital £12,000, in £1 shares. Formed to acquire inventions relating to improvements in airships and aeroplanes, under agreement with E. J. Lester and W. G. Best.



## Aeronautical Patents Published.

Applied for in 1908.

Published July 29th, 1909.

12,013. J. L. Garsed. Steering and balancing aerial machines.  
13,809. C. Lorenzen. Aerial machines.

Applied for in 1909.

Published July 29th, 1909.

771. T. C. Woodworth. Flying machines.  
8,442. F. Mohr. Aerial toy.  
7,524. A. De La Hault and J. Miesse. Production of mechanical movements for aeroplanes.

Published August 5th, 1909.

7,524. A. De La Hault and J. Miesse. Production of mechanical movements for aeroplanes.

## BACK NUMBERS OF "FLIGHT."

THE publishers have pleasure in announcing that they have secured a few of the back issues of FLIGHT, and any of our new readers who may wish to complete their sets may obtain the first thirty-one numbers for 4s. od. (abroad 5s. 1od.) post free, from the Publishers, 44, St. Martin's Lane, W.C.

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